

Amendments to the Claims

The following listing of claims replaces all prior versions of the claims in the Application. With reference to the listing it is noted that, herewith, claims 7-9, 15, 17-21, 23, 25-29, 31, and 33-37 are canceled without prejudice or disclaimer, and claims 1-6, 10-14, 16, 22, 24, 30, and 32 are amended.

Listing of Claims

1. (Currently Amended) ~~An image reading apparatus for outputting a difference between read data acquired by reading an image and reference data acquired by reading a reference image as image data, characterized by comprising:~~ The apparatus according to claim 16, further comprising:

~~resolution setting means for setting unit adapted to set a resolution in the image read image reading operation by said image reading unit;~~

~~read data acquiring means for acquiring unit adapted to acquire the read image data in number corresponding to the set resolution; and~~

~~output clock generating means for generating an output clock for outputting the image data in the image read;~~

~~dummy clock generating means for generating a dummy clock for the output clock when the reference data is to be acquired by reading the reference image; and~~

~~timing setting means for matching unit adapted to match a timing of the output clock with a timing of the dummy clock in an interval during which the image is read and read data is output.~~

2. (Currently Amended) The apparatus according to claim 1, ~~characterized in that wherein~~ said timing setting ~~means~~ unit comprises ~~an~~ output bit count changing ~~means~~ for ~~changing~~ unit adapted to change the number of output bits of the image data, and the number of output bits is changed to match the timing of the output clock with the timing of the dummy clock.

3. (Currently Amended) The apparatus according to claim 2, ~~characterized in that wherein~~ said output bit count changing ~~means~~ unit can change the number of bits to one in a serial output form and an integral power of two in a parallel output form.

4. (Currently Amended) The apparatus according to claim 1, ~~characterized in that wherein~~ said timing setting ~~means~~ unit comprises output clock frequency changing ~~means~~ for ~~changing~~ unit adapted to change a frequency of the output clock, and the frequency of the output clock is changed to match the timing of the output clock with the timing of the dummy clock.

5. (Currently Amended) The apparatus according to claim 1, ~~characterized in that wherein~~ said timing setting ~~means~~ unit comprises driving frequency changing ~~means~~ for changing unit adapted to change a driving frequency for a sensor for reading the image, and the driving frequency is changed to match the timing of the output clock with the timing of the dummy clock.

6. (Currently Amended) The apparatus according to claim 1, ~~characterized in that wherein~~ said

read data acquiring ~~means~~ unit does not acquire as the ~~read~~ image data a portion in which the timing of the output clock differs from the timing of the dummy clock.

7-9 (Canceled)

10. (Currently Amended) ~~An image reading method of outputting a difference between read data acquired by reading an image and reference data acquired by reading a reference image as image data, characterized by comprising: The method according to claim 24, further comprising the steps of:~~

~~the step of~~ setting a resolution in the image read reading step;

~~the step of~~ acquiring the read image data in number corresponding to the set resolution;

and

~~the step of generating an output clock for outputting the image data in the image read;~~

~~the step of generating a dummy clock for the output clock when the reference data is to be acquired by reading the reference image; and~~

~~the step of~~ matching a timing of the output clock with a timing of the dummy clock in an interval during which the image is read and read data is output.

11. (Currently Amended) An image reading apparatus ~~characterized by~~ comprising:

~~an image read means for reading an~~ reading unit adapted to read image data;

~~a serial output means for outputting~~ unit adapted to output the image data read by said ~~image read means~~ reading unit in a serial form; and

~~a plurality of parallel output means for outputting~~ units adapted to output the image data

read by said image ~~read means~~ reading unit in a plurality of types of parallel forms.

12. (Currently Amended) The apparatus according to claim 11, ~~characterized in that~~ wherein said image ~~read means~~ reading unit is mounted on an image reading apparatus main body so as to be interchangeable with a printhead for printing an image.

13. (Currently Amended) The apparatus according to claim 11, ~~characterized in that~~ wherein said plurality of parallel output ~~means~~ units are configured to output the image data in nth (n is an integer) power of two bits.

14. (Currently Amended) The apparatus according to claim 11, ~~characterized by~~ further comprising ~~a switching means for switching~~ unit adapted to switch said plurality of parallel output ~~means~~ units in accordance with a read resolution of said image ~~read means~~ reading unit.

15. (Canceled)

16. (Currently Amended) An image reading apparatus ~~for outputting a difference between read data acquired by reading an image and reference data acquired by reading a reference image as image data~~, ~~characterized by~~ comprising:

~~an image read means for reading~~ reading unit adapted to read an image;

~~an output clock generating means for generating~~ unit adapted to generate an output clock signal for outputting ~~the~~ image data ~~read by~~ from said image ~~read means~~ reading unit; and

~~a dummy clock generating means for generating~~ unit adapted to generate a dummy clock

similar to the output clock signal when said image reading unit reads the a reference image is to be read.

17-21 (Canceled)

22. (Currently Amended) An image reading method ~~characterized by~~ comprising the steps of:

~~the image read step of reading an image data; and~~
~~the step of selecting one of output means unit in a serial form and output means units in a plurality of types of parallel forms to output the image data read in the image data read reading step.~~

23. (Canceled)

24. (Currently Amended) An image reading method ~~of outputting a difference between read data acquired by reading an image and reference data acquired by reading a reference image as image data, characterized by~~ comprising the steps of:

~~the image read step of reading an image;~~
~~the output clock generating step of generating an output clock signal for outputting the image data read in the image read reading step; and~~
~~the dummy clock generating step of generating a dummy clock similar to the output clock signal when the a reference image is to be read in the image reading step.~~

25-29 (Canceled)

30. (Currently Amended) A storage medium storing a control program for controlling an image reading apparatus, ~~characterized in that~~ wherein

the control program comprises:

a code for ~~the a image read~~ step of reading ~~an~~ image data; and

a code for ~~the a~~ step of selecting one of output ~~means~~ unit in a serial form and output ~~means~~ units in a plurality of types of parallel forms to output the image data read in the image data read reading step.

31. (Canceled)

32. (Currently Amended) A storage medium storing a control program for controlling an image reading apparatus ~~for outputting a difference between read data acquired by reading an image and reference data acquired by reading a reference image as image data, characterized in that,~~ wherein

the control program comprises:

a code for ~~the a image read~~ step of reading an image;

a code for ~~the a output clock generating~~ step of generating an output clock signal for outputting the image data read in the image read reading step; and

a code for ~~the a dummy clock generating~~ step of generating a dummy clock similar to the output clock signal when ~~the a~~ reference image is to be read in the image reading step.

33-37 (Canceled)